



Regulatory Unit

Monthly Performance Report

December 1999

**Office of Safety
Regulation of the
TWRS
Privatization
Contractor**

Richland Operations
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Table of Contents

EXECUTIVE SUMMARY.....	2
MONTHLY HIGHLIGHTS	2
<i>Inspection Program Activities.....</i>	<i>2</i>
Inspection of BNFL's Safety Integration for Design Activities	2
Inspection of BNFL's Authorization Basis Management Process	3
Inspection Procedure Development.....	3
<i>Design Reviews.....</i>	<i>3</i>
<i>Integrated Safety Management Reviews (ISM Cycle II)</i>	<i>4</i>
<i>Industrial Hygiene and Safety (IH&S).....</i>	<i>4</i>
COST PERFORMANCE (GRAPH)	6
COST PERFORMANCE SUMMARY	7
NEAR-TERM LOOK AHEAD	7
<i>January.....</i>	<i>7</i>
<i>February.....</i>	<i>7</i>
<i>March.....</i>	<i>7</i>
PROGRAM PERFORMANCE OVERVIEW.....	8
PERFORMANCE SUMMARY (CHART) – PROGRAM DIRECTION AND PROGRAM SUPPORT	9
MILESTONE CONTROL LOG	10
FULL-TIME EQUIVALENCY PROFILE (GRAPH).....	12
CHANGE CONTROL STATUS LOG.....	13

EXECUTIVE OVERVIEW

EXECUTIVE SUMMARY

Through design reviews, safety reviews and inspection the Regulatory Unit has identified and is working with BNFL to resolve three significant issues that must be resolved prior to proceeding with Part B-2: dose assessment methodology, authorization basis (AB) maintenance, and adherence to procedures.

The issue of dose assessment methodology was first identified during review of BNFL's Initial Safety Assessment. BNFL and the RU participated in a Topical Meeting to further discuss the issue. BNFL submitted their proposed methodology in October 1999, for RU review, but it was found to be missing necessary detail that would not become known until the Construction Authorization Request (CAR) was submitted. In order to preserve the prospects for timely review of the CAR, it is necessary that these uncertainties be resolved. There exists a potential that this issue will be resolved in late January or February.

The RU identified inadequate BNFL management of the TWRS-P WTP authorization basis as an issue during inspections in October and November. The inspections found that the Contractor had failed to establish a process that would ensure the authorization basis is maintained current, as required by the contract, with the facility design. The RU and BNFL will meet to discuss this issue again on January 27, 2000. BNFL contends that maintaining the AB is cost prohibitive. The RU considers much of the cost is due to BNFL self-imposed administrative burden. Resolution of this issue is not expected until March or April.

Nearly all of the eleven design phase RU inspections of BNFL have identified procedure compliance problems. To address this RU concern, BNFL has established a team to determine the root cause of this problem. The team has been tasked to complete its evaluation by January 31, 2000. The RU will assess the effectiveness of the BNFL corrective actions through follow-up inspection.

MONTHLY HIGHLIGHTS

During the reporting period, the Regulatory Unit (RU) completed or continued efforts on the following key work activities:

- Issued Authorization Basis Management and Safety Integration Inspection reports
- Observed design and integrated safety management reviews
- Issued detailed planning for Industrial Health and Safety Regulatory planning

The following details the above information.

Inspection Program Activities

Inspection of BNFL's Safety Integration for Design Activities

The Regulatory Unit issued an inspection report on the Safety Integration of the BNFL design. The inspection team determined that BNFL was implementing an effective management and design program to ensure safety integration throughout the project. BNFL management, staff, and design programs reflected a good safety culture that was evident in all areas reviewed. The inspection team identified one Finding based on four minor

examples of failure to follow procedures. These included:

- Failure to specify review criteria prior to reviewing documents in accordance with procedures
- Failure to follow administrative aspects of the Project Safety Committee procedure
- Failure to maintain document review and comment forms in accordance with procedures
- Failure to control the output of the Hazard Analysis teams in accordance with procedures

Inspection of BNFL's Authorization Basis Management Process

The Regulatory Unit issued an inspection report associated with follow-up issues identified during an inspection conducted from October 4 - 8, 1999, on BNFL's Authorization Basis Management process. The inspection team concluded that BNFL's Authorization Basis Maintenance process was disjointed, confusing and in some cases inconsistent with TWRS-P Contract requirements. Four Findings and two observations were identified.

Findings:

- Failure to establish a process that ensured design-related aspects of the authorization basis were maintained current with the facility design
- Allowing untrained personnel to perform screening reviews and safety evaluations
- Two examples of staff not following procedures
- Revising information in a quality-related record without revising the record as required

Observations:

- Authorization Basis Maintenance procedures contain inconsistent direction from procedure to procedure.
- The process for notifying the RU of changes to an authorization basis document when the effectiveness of the document did not change as a result of the revision was informal instead of formal.

Inspection Procedure Development

The RU continues development of limited construction and construction inspection procedures. Thus far, approximately 40 inspection procedures have been identified for the construction phase (excluding pre-operational testing). These procedures include process activities such as geotechnical, structural concrete, structural steel, electrical, etc., Quality Assurance/Quality Control activities, and radiological control activities. To date, seven draft procedures have been approved, six others are being reviewed, and a number of procedures are in various states of development. The RU plans to have all these inspection procedures completed by August 2000, at least three months before their intended use.

Design Reviews

The effectiveness of design reviews has significantly increased from the initial reviews conducted in second and third quarters of CY 1999. Currently, design reviews are facilitating integration among disciplines and between primary processing facilities. Participants routinely include safety and operations representatives who are providing meaningful input.

However, BNFL has completed less than 60 percent of planned design reviews, which indicates BNFL is behind schedule. Although behind the Integrated Master Plan schedule, BNFL has made significant design progress in the past two months. The design has become more detailed, integration has improved, operating

issues have been raised and addressed, and features to control hazards are being included. Significant design changes in areas such as pretreatment to remove sulfate, LAW melter shielding concepts, and the deletion of HLW melter breakdown cell impact many interfacing systems contributing to slower than anticipated progress in the advancement of the design. Significant progress is needed to bring the design to a level of maturity to support the planned submission of Construction Authorization Request in late November.

In December, RU staff members observed the following five single discipline design reviews:

- High-Level Waste (HLW) and Low-Activity Waste (LAW) Product Handling, Lidding, Sampling, and Weld
- HLW Phase 2 Layout
- HLW and LAW Product Decontamination, Swab, Monitor, and Export
- Pretreatment Evaporators and Ultra-filtration
- HLW and LAW Container Fill

Integrated Safety Management Reviews (ISM Cycle II)

BNFL is currently performing its second iteration (ISM Cycle II) of analysis of the hazards and hazardous situations associated with the design of the TWRS-P WTP. The first iteration (Cycle I) identified the hazards and hazardous situations, and in most instances established strategies for controlling the hazard. In ISM Cycle II, BNFL is identifying the standards with which to design, construct, and operate the facility.

Regulatory Unit oversight of Integrated Safety Management Reviews (ISM Cycle II) has determined that, in general, BNFL has assembled appropriate hazards analysis teams with representation from design, safety, and operations. The BNFL team members actively participate in the hazard analysis process and conduct a thorough analysis of the hazards and hazardous situations.

The RU observed 8 ISM Cycle 2 hazards identification meetings, as follows:

- Pretreatment System 540 (Process Vessel Vent)
- HLW System 100 (Receipt and Blending)
- Pretreatment System 210 (HLW Receipt Tanks)
- LAW System 600 (Reagents)
- BOF System 600 (Reagents)
- Pretreatment Systems 310/320 (Cesium Removal by Ion Exchange and Nitric Acid Recovery)
- Pretreatment Systems 120/130 (LAW Feed and Melter Feed Evaporation)
- Pretreatment System 110 (LAW Receipt).

Industrial Hygiene and Safety (IH&S)

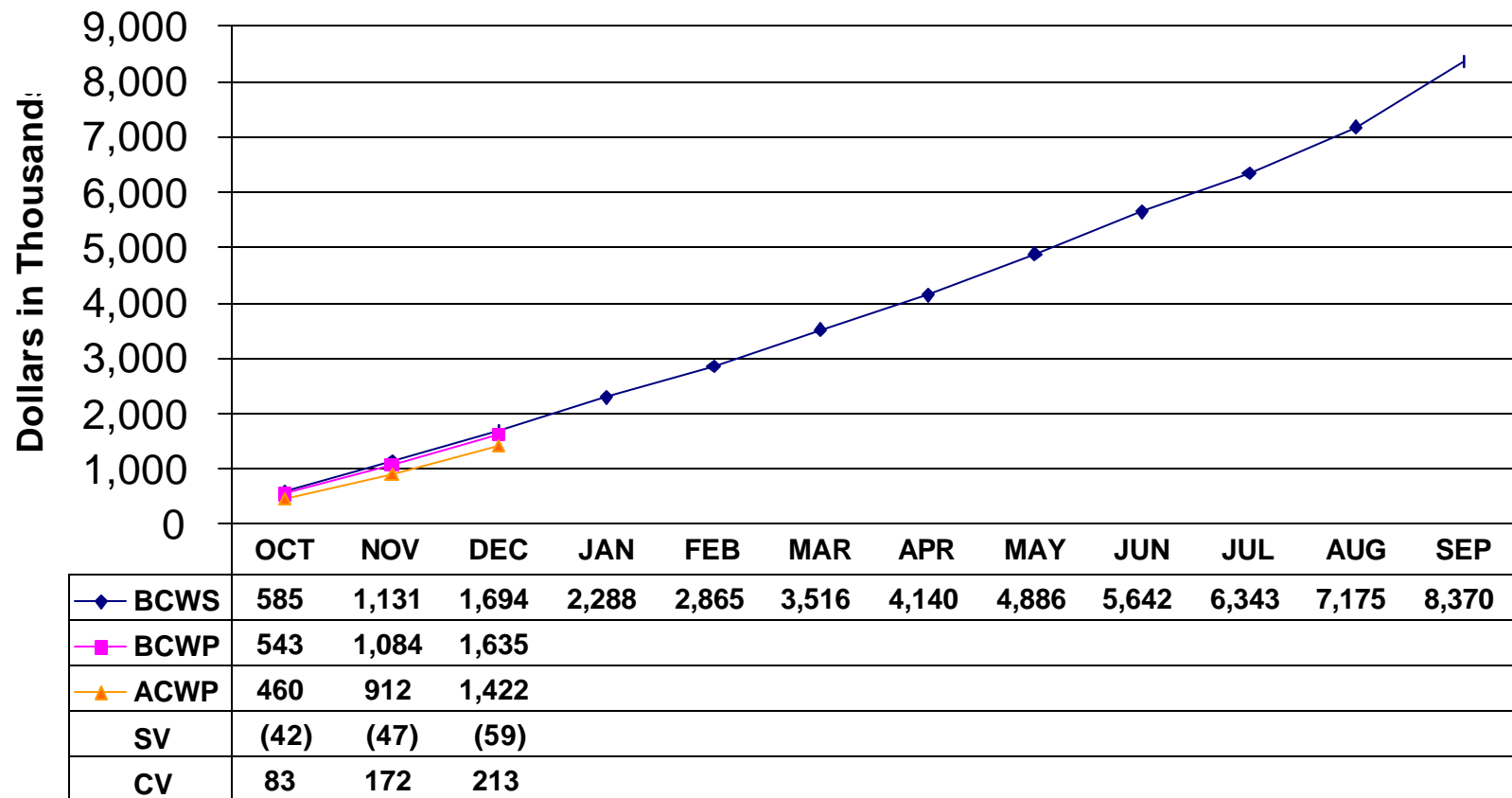
The TWRS-P contract requires a complete IH&S regulatory program to be in place before start of construction (including limited construction) of the TWRS-P Waste Treatment Plant (WTP), which is currently planned for December 2000. Based on direction from EM-1, the RU is developing a program to regulate Occupational Safety and Health at the BNFL facilities. The RU plans completion of the IH&S regulatory program well in advance of December 2000. To meet this goal the RU recently completed a cost estimate

and schedule, and prepared four documents. The first two were issued for contractor review and the last two were circulated for internal review including DOE-HQ. The four documents are:

1. A document providing the RU position on, and expectations for, BNFL's IH&S program.
2. Review guidance for the IH&S program for construction start.
3. A document providing the RU position on conducting design reviews for IH&S.
4. An IH&S Regulatory Plan.

Because BNFL prefers OSHA to the RU as the IH&S regulator, in late December BNFL sent a letter to the Department of Labor (DOL) requesting reconsideration of OSHA's initial decision not to regulate Industrial Hygiene and Safety (IH&S) at the BNFL WTP. The letter provided a specific "proposal" for OSHA regulation - primarily a background statement and a list of factors favoring OSHA regulation. The letter notes the proposal was reviewed by the AFL-CIO and local Building Trades and implies their support.

The DOL agreed to meet with BNFL on the proposal and asked that DOE also attend. The RU and EH-51 (Office of Occupational Safety and Health Policy) will attend this meeting planned for January 25, 2000, in Washington, D.C. The RU supports OSHA regulation. However, significant technical (e.g., OSHA radiological standards for workers) and funding issues are unresolved. EH-51 believes OSHA will not accept the regulatory responsibility for the BNFL facilities.

COST PERFORMANCE (Graph)**Regulatory Unit Cost Performance**

COST PERFORMANCE SUMMARY

The fiscal year to date cost through December indicates a financial underrun of \$272K. This underrun is attributed to a favorable cost variance of \$213K and an unfavorable schedule variance of \$59K. The cost variance is due primarily to savings associated with Design Reviews, Authorization Basis Maintenance, Internal Policy development, Construction Authorization Review Preparation activities, Position Paper development, and Review Guidance development. The schedule variance is due to delays in receiving comments from BNFL on review guidance for the Standards Approval Package (SAP), the Limited Construction Authorization (LCA), and CAR. In addition, BNFL has experienced delays in fixing site and facility layouts, which has led to slower than planned progress in the design process leading to delays in scheduled Design Reviews.

There are no programmatic impacts anticipated at this time and the favorable cost variance will be reprogrammed to initiate new emergent priority workscope within the RU.

NEAR-TERM LOOK AHEAD

	Planned Due Date
January	
• Issue Evaluation Report on BNFL's QAPIP, Rev. 4C	1-07-00
• Conduct Design Process Inspection	1-10-00
• Issue Tri-Annual Openness Report	1-21-00
• Conduct Topical Meeting on Risk Objectives, Sellafield database	1-25-00
• Issue Revised Interface Plan	1-31-00
• Observe Design and Safety Reviews	
February	
• Issue Revised CAR, LCA and SAP Guidance	2-01-00
• Conduct Employee Concerns Inspection	2-07-00
• Participate in RU/BNFL interface workshop	2-09-00
• Issue Design Process Inspection Report	2-14-00
• Present Thirteenth Quarterly RU Report	2-17-00
• Conduct Topical Meeting on Electrical System	2-22-00
March	
• Conduct Training & Qualification Inspection	3-06-00
• Issue Employee Concerns Program Inspection Report	3-13-00
• Conduct Topical Meeting on LAW/HLW Melter Design & Safety Issues	3-21-00

PROGRAM PERFORMANCE OVERVIEW

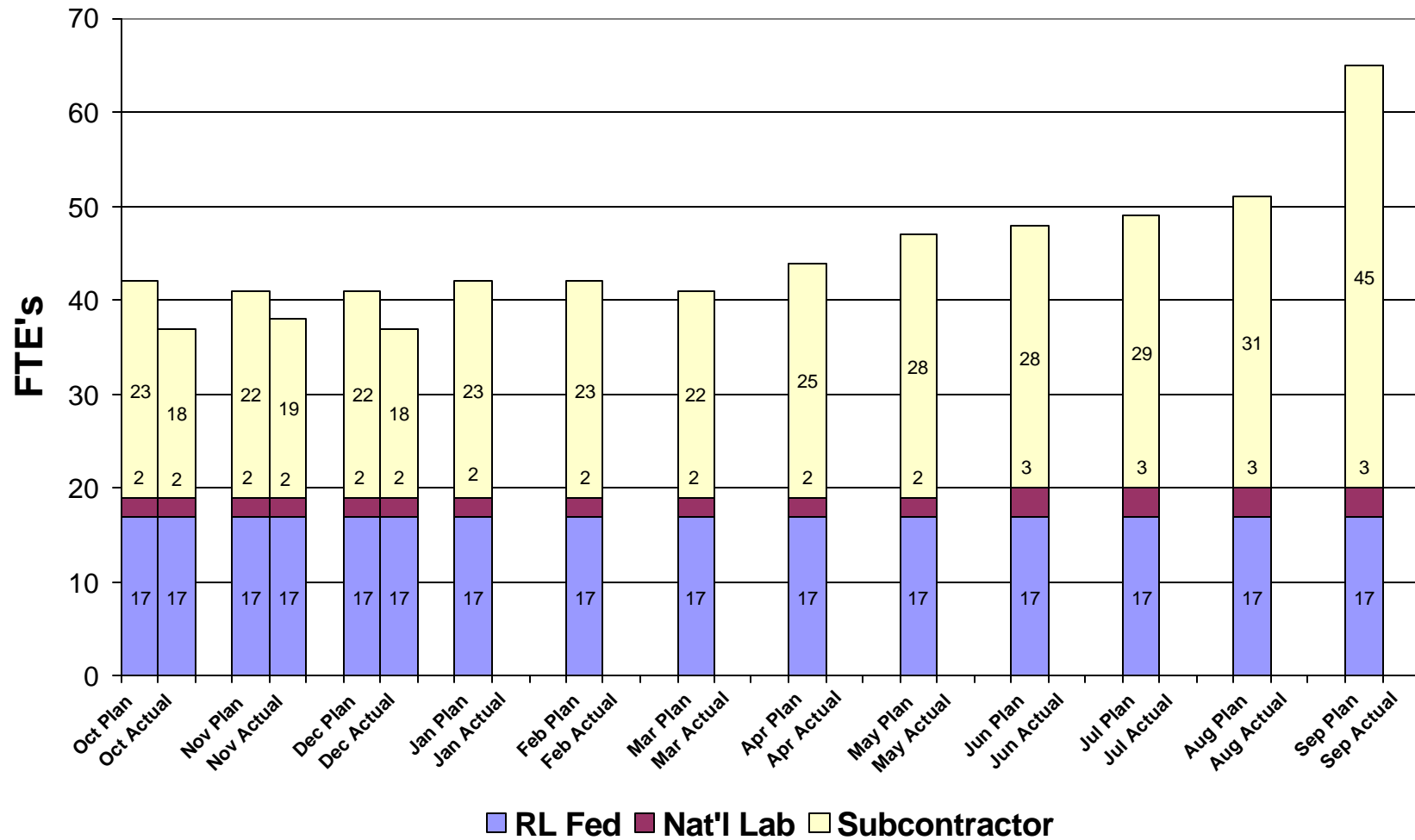
PERFORMANCE SUMMARY (Chart) – Program Direction and Program Support

		STATUS thru November					FY 2000		
		BCWS	BCWP	ACWP	SV	CV	BAC	EAC	Delta
RU1	Program Management								
	Program Direction	338	338	337	0	1	1,360	1,360	0
	Program Support	399	399	370	0	29	1,933	1,933	0
	Total RU1	737	737	707	0	30	3,293	3,293	0
RU2	Regulatory Policy & Practices								
	Program Direction	34	34	31	0	3	80	80	0
	Program Support	87	87	40	0	47	376	376	0
	Total RU2	121	121	71	0	50	456	456	0
RU5	Recurring Safety Reviews								
	Program Direction	102	94	124	(8)	(30)	427	427	0
	Program Support	391	366	278	(25)	88	1,613	1,613	0
	Total RU5	493	460	402	(33)	58	2,040	2,040	0
RU6	Construction Authorization								
	Program Direction	22	20	25	(2)	(5)	301	301	0
	Program Support	98	74	34	(24)	40	1,179	1,179	0
	Total RU6	120	94	59	(26)	35	1,480	1,480	0
RU9	Oversight & Inspections								
	Program Direction	80	80	53	0	27	400	400	0
	Program Support	139	139	123	0	16	596	596	0
	Total RU9	219	219	176	0	43	996	996	0
RU10	Special Projects								
	Program Direction	2	2	1	0	1	2	2	0
	Program Support	2	2	6	0	(4)	103	103	0
	Total RU10	4	4	7	0	(3)	105	105	0
Total Regulatory Unit									
	Program Direction	578	568	571	(10)	(3)	2,570	2,570	0
	Program Support	1,116	1,067	851	(49)	216	5,800	5,800	0
	Total RU	1,694	1,635	1,422	(59)	213	8,370	8,370	0

MILESTONE CONTROL LOG

<i>MILESTONE CONTROL LOG</i>							
<i>MILESTONE</i>		<i>WBS</i>	<i>MILESTONE DESCRIPTION</i>	<i>BASELINE COMPLETION DATE</i>	<i>SCHEDULE STATUS</i>	<i>FORECAST COMPLETION DATE</i>	<i>ACTUAL COMPLETION DATE</i>
<i>TYPE</i>	<i>NUMBER</i>						
<i>FISCAL YEAR 2000</i>							
RL	00-010	RU902	Standards Selection Inspection rpt issued	10/12/99	Complete	10/06/99	10/06/99
RL	00-011	RU902	Authorization Basis Inspection rpt issued	11/08/99	Complete	12/13/99	12/13/99
RL	00-012	RU902	Safety Integration Inspection rpt issued	12/07/99	Complete	12/03/99	12/03/99
FO	00-013	RU203	IH&S Plan issued	12/30/99	Behind	4/07/00	
FO	00-015	RU205	Revised Interface Plan issued	1/31/00	On Schedule	1/31/00	
RL	00-016	RU902	Design Process Inspection rpt issued	2/14/00	On Schedule	2/14/00	
RL	00-017	RU902	Employee Concerns Program Inspection rpt issued	3/13/00	On Schedule	3/13/00	
RL	00-018	RU902	Training & Qualifications Inspection rpt issued	4/07/00	On Schedule	4/07/00	
RL	00-019	RU608	SAP Rvw Handbook issued	5/12/00	On Schedule	5/12/00	
RL	00-027	RU608	Initiate Review of SAP	5/16/00	On Schedule	5/16/00	
RL	00-020	RU605	LCA Rvw Handbook issued	5/17/00	On Schedule	5/17/00	
FO	00-004	RU502	ER & Approval of QAPIP Rev. 6 issued	6/09/00	On Schedule	6/09/00	
RL	00-014	RU902	Standards Implementation Inspection rpt issued	6/19/00	On Schedule	6/19/00	
RL	00-026	RU605	Initiate Review of LCA Request	6/26/00	On Schedule	6/26/00	
FO	00-002	RU204	Openness Plan Rev. 3 issued	6/30/00	On Schedule	6/30/00	
RL	00-021	RU902	QA Inspection rpt issued	7/17/00	On Schedule	7/17/00	
RL	00-022	RU602	CAR Rvw Handbook issued	7/21/00	On Schedule	7/21/00	
FO	00-023	RU502	Approval of RPP Rev. #3 issued	7/28/00	On Schedule	7/28/00	
RL	00-024	RU902	Corrective Actions Inspection rpt issued	8/11/00	On Schedule	8/11/00	
RL	00-025	RU902	ALARA Inspection rpt issued	9/11/00	On Schedule	9/11/00	

<i>MILESTONE CONTROL LOG</i>							
<i>MILESTONE</i>		<i>WBS</i>	<i>MILESTONE DESCRIPTION</i>	<i>BASELINE COMPLETION DATE</i>	<i>SCHEDULE STATUS</i>	<i>FORECAST COMPLETION DATE</i>	<i>ACTUAL COMPLETION DATE</i>
<i>TYPE</i>	<i>NUMBER</i>						
FO	00-003	RU102	FY 2001 PMP issued	9/29/00	On Schedule	9/29/00	

FULL-TIME EQUIVALENCY PROFILE (Graph)**Regulatory Unit FTE Profile**

CHANGE CONTROL STATUS LOG

<i>Regulatory Unit FY 2000 Change Control Log</i>							
CIN#	Change Classified.	Author	WBS#	Date Change Originated	Change Request Explanation	CEB Review Date	CEB Disposition
00-001	I	K.D. Grindstaff	RU	11/99	Processing of the FY 1999 Carryover into FY 2000 Baseline and Realignment of FY 2000 Cost Savings to Emergent Priority Workscope.	11/24/99	Approved
00-002	II	K.D. Grindstaff	RU	12/99	Added new emergent workscope associated with impact risk balancing between TWRS and the TWRS-P facility.	12/03/99	Approved